CARILION CLINIC

Department of Primary Care and Regional Medicine

QI Project Log: CHF-Humedica

Updated:
September 28, 2012

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ITEM	PROJECT CHARTER	1 DEFINE	2 MEASURE	3 ANALYZE	4 IMPROVE	5 CONTROL
1	**Humedica Mindshare** **CHF Tool Evaluation** . **Objectives** Determine if the Mindshare, Humedica database is able to adequately support intensive population management work with Congestive Heart Failure (CHF) patients. 1. Validate the database has accurate data and adequate features. 2. Provide baseline data to IM CCR3 Dept about their CHF population (see 2.5 Baseline data 1-8). 3. Report results of predictive modeling tool applied to this population, further identifying a cohort as "CHF priority" patients. 4. Establish a workflow to utilize database. **Leader** FNP **Advisor** MD 1 - Family Med, Informatics MD 2 - CMIO MD 3 **Facilitator** FNP **HIT Data** Application Analyst **Coordinator** RN 1 RN 2 **Study Site** IM CCR3 **Scope:** Upon the completion of the database analysis, a decision will be made regarding a secondary project. The secondary project is an intensive population management of CHF patients at IM CCR3 over a 6 month period. Success with the secondary project will determine adoption. **Chronology** 05.18.12-Brainstorming session for project Application Analyst and Humedica explore capabilities of database. 06.14.2012-Application Analyst built reports. Mtg to define project 08.29.12-Initial draft of project for review by each member of project team. 09.05.2012-Validation of Priority list created by predictive modeling tool. 09.7.12-Baseline Humedica report analyzed by project team. Decide to move forward with intensive population management portion of trial. 10/2012- Presentation to R3 Providers baseline data and workflow. 3 & 6 month outcomes.	**1.1 Significance** CHF admissions account for significant patient morbidity and system cost. CHF is a current area of focus for New Model of care for the Department - Primary Care and Community Medicine. **1.2 Problem Identification** Current Epic CHF Registry dose not provide the high risk features needed to prioritize and stratify patients. There is no capability to predict hospitalization or utilization.	**2.1 CTQ Characteristics** Patient and their clinical features are present in the Humedica database and the Epic EMR. **2.2 Standards** No internal standards exist **2.3 Data Source** Humedica, Mindshare and Epic EMR **2.4 Measurement Validation** Using the Humedica generated list of patients an audit will be done of 10% of the total population to validate presence of the following features: 1) CHF diag or relevant features triggering inclusion, who receive care at IM CCR3 2) One visit with PCP within the last 12 months 3) Presence of either an Ace or ARB 4) Presence of a Beta-blocker **appendix 1 Criteria for Diagnosis Humedica** **2.5 Baseline Data** Database of all patients with a diagnosis of CHF or relevant features triggering inclusion, who receive care at IM CCR3 sorted by PCP. Definition of CHF inclusion rule from Humedica. 1. Defined list of patients with a CHF diagnosis with one visit with the PCP in the last 24 months. 2. Report of total number of all-cause ED visits within the rolling year for the defined population 3. Report of the total number of all-cause hospital admissions within the rolling year for the defined population 4. Patients with clinical features present and at goal. a) % of pts with BP measurement present b) % of pts with BP at goal (140/90) c) % of pts prescribed Ace Inhibitor or ARB. d) % of pts prescribed beta-blocker. e) % of pts with BP at goal, and on Ace Inhibitor or ARB, and on beta-blocker. 5. Predictive modeling tool applied to the defined population generating a priority patient list. 6. Running above reports with the added feature of patients that have been seen with 2 or more visits at the CHF clinic to identify potential best practice opportunities.	**3.1 Process Elements** CHF Clinical Guideline Facilitator/Analyst/Care Coordinator validate features (see Measurement 2.4 1-4) (One time validation, at onset.) Initiate patient list in Epic to import Humedica priority list. 1) "CHF Priority" list using predictive tool. Care Team review of CHF population assessment tool and contact procedure (TBD) **3.2 Site Audit Findings** 9/5/12 Audit done of Cohort as noted in 2.4 Medication opportunity possibly, further chart review needed for Diastolic vs Sytolic to refine guideline based care. High risk patients found who had multiple admissions in the last year. Patients with Diasolic CHF identified that are now stable. *Summary:* Audit verified the Humedica Tool was indeed accurate based on Measurement Validation defined in 2.4.	**4.1 Patient lists actionable** Create a workflow for the ongoing monthly import of Humedica data into Epic patient lists for CHF Priority. **4.2 Measurement System Accuracy** Humedica's predictive tool is the basis for the priority list. Create a workflow for adding patients to the predictive tool's priority list. Patients who have had an ED/Hospital visit will be added daily by the care coordinator as part of facility contact activity. This process supports system accuracy and provides current data to mitigate readmissions.	**5.1 Implemented Process Controls** Application analyst has monthly workflow for populating priority lists Care coordinator has procedure for assessment, contact, and/or nurse visit. **5.3 Evaluation** Quarterly monitoring of all cause admissions for the population by Sr Care coordinator and lead Physician. Biannual monitoring of clinical parameters Sect 2.5 4a,4b,4c,4d,4e